

United States Department of the Interior
National Park Service

VLR-4/22/98

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property DAVIS AND KIMPTON BRICKYARD
historic name same
other names/site number HAER No. VA-43, VDHL No. 44NN15

2. Location Within the U.S. Army Transportation Center at Fort Eustis
street & number On west bank of the Warwick River ☒ not for publication
city, town City of Newport News ☒ vicinity
state Virginia code VA county N/A code 700 zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
<input type="checkbox"/> private	<input type="checkbox"/> building(s)	Contributing	Noncontributing
<input type="checkbox"/> public-local	<input type="checkbox"/> district		<u> </u> buildings
<input type="checkbox"/> public-State	<input checked="" type="checkbox"/> site	<u> </u> 5	<u> </u> sites
<input checked="" type="checkbox"/> public-Federal	<input type="checkbox"/> structure	<u> </u> 8	<u> </u> structures
	<input type="checkbox"/> object	<u> </u> 13	<u> </u> objects
			<u> </u> Total

Name of related multiple property listing:
N/A

Number of contributing resources previously
listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ☐ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 50. In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of certifying official

Date

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of commenting or other official

Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

- ☐ entered in the National Register.
☐ See continuation sheet.
☐ determined eligible for the National Register. ☐ See continuation sheet.
☐ determined not eligible for the National Register.
☐ removed from the National Register.
☐ other, (explain):

Signature of the Keeper

Date of Action

Historic Functions (enter categories from instructions)

Industrial/Processing/Extraction

Brick Manufacturing

Clay Extraction

Saw Mill

Current Functions (enter categories from instructions)

Military Facility

7. Description

Architectural Classification

(enter categories from instructions)

N/A

Materials (enter categories from instructions)

foundation brick

walls

roof

other

Describe present and historic physical appearance.

The "Davis and Kimpton" Brickyard, located on the west bank of the Warwick River, approximately four miles upstream from its confluence with the James River (Figure 1, also Yorktown Quadrangle 7.5' Topographic Map attached), is the site of a late nineteenth/ early twentieth century industrial complex where brick was manufactured from locally-dug clay and a saw mill was operated. Industrialization of the tract as a brickyard began in 1898 with the purchase of 36.75 acres of land from Joseph Nettles and the Bank of Hampton by John W. Davis and Alexander H. Kimpton. The saw mill was in operation at the site sometime prior to 1904.

The site consists of the remains of the principal activity areas, an "extractive" area, a "manufacturing" area and associated support structures (Figure 2), which have survived since brickmaking operations were abandoned in 1918.

The extractive area, consisting of two large clay borrow pits, is immediately north and south of the manufacturing area (Figure 2). The clay pits cover an area of approximately seven acres and have been excavated to a depth of approximately five feet (at or slightly below sea level). Though the clay pits are now tidal marsh, this area originally was dry land situated similarly to the adjacent wooded areas of Mulberry Island. Excluding the first foot of topsoil, approximately 1,200,000 cubic feet (45,000 cubic yards) of clay was extracted for brick manufacturing purposes over the approximate twenty years of production. Although this approximation may vary considerably from the actual amount of clay utilized, it does, however, provide clues as to the scale and size of the Davis and Kimpton Brickyard's production.

The manufacturing area (Figure 2) consists of seven components, all of which are interrelated elements in the production of brick. These elements consist of surviving machinery such as a stationary steam engine, disintegrator, pug mill, brick machine, and other machine mounts, along with transportation-related remains and kiln ruins. These components are considered individually below, and an interpretation of their function is presented in the following discussion concerning the Manufacturing Process.

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The remains of the stationary steam engine and boilers (Photographs 1 and 2) represent the power source for the Davis and Kimpton brickmaking operation. Situated at the southeastern end of the production line (Figure 2), the boiler and engine provided power for both brick manufacturing and the sawing of lumber, the latter an historically documented activity located at the same site. The boiler (Photograph 2) is currently situated on the crest of a mound of coal cinders and brick fragments, and would have originally been suspended from two iron rods supported by cast-iron upright posts. Though the mound of coal cinders was not archeologically tested, it is likely to contain the remains of a brick firebox in which coal would have been burned for the production of steam in the boiler. Other significant aspects of the boiler are the 78 pipes spanning its interior and a top vent through which steam would have been piped to the engine.

The stationary steam engine, situated approximately 10 feet northeast of the boiler, was supported on a brick platform providing approximately three feet of ground clearance (measured from the projected center of the drive shaft). The engine was manufactured by an as-yet undocumented company represented by the initials "H-S-G" (Figure 3), and it is possible that the boiler was also manufactured by that firm. Though portions of the engine have been vandalized, all of its principal components are represented, including steam intake vents, cylinder and piston, rocker arm, and drive shaft bearings. Though the drive shaft is no longer present, it was likely to have driven a belt wheel of up to five feet in diameter, with at least one belt situated on the northeast side of the engine roughly in line with the belt wheels of the disintegrator. The power generated by the steam engine would have been transported over a distance of approximately 50 feet to operate all of the machinery discussed below.

The disintegrator (Photograph 3), located at the northwestern end of the production line (Figure 2), served to pulverize raw clay into a uniform consistency. The disintegrator is the only piece of machinery at the site which has suffered no damage from vandalism over the last 70 years since the purchase of the property by the government. The disintegrator is currently situated in the bottom of a rectangular, brick-lined pit, the bottom of which is at least four feet below modern grade. The brickwork in the pit is laid with a Portland cement in English bond and partially consists of waster brick. Based upon the presence of large anchor bolts on the top of the brick wall, the disintegrator was originally suspended above the pit on large wooden beams. The subsequent decay of the beams over the last few decades resulted in the collapse of the machinery into the pit. A wooden hopper would have also been present on the top of the disintegrator; fragments of it still survive, as does a fragment of a large wooden support post in the bottom of the pit.

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Based upon its technical specifications, this Chambers Brothers disintegrator corresponds with the "No. 1 Size Standard Disintegrator" described in a 1907 Chambers Brothers Company trade catalog. Disintegrators may have been manufactured by the Chambers Brothers Company as early as the mid-1880s. They served to pulverize clays of otherwise variable textures to a uniform consistency. No information concerning its production capacities was revealed through the technological research; however, it is likely that its capacity was appropriate for the brickmaking machine in use at the Davis and Kimpton operation.

The pug mill (Photograph 4) is situated immediately southeast of the brick machine (Figure 2). It consists of a trough approximately six feet in length and less than two feet in width and depth, with a central drive shaft extending through the entire length of the trough and nearly three feet beyond its open (discharge) end. A series of 30 cast-iron mixing blades are attached in sockets along the shaft. Noticeably absent are five additional blades at the open end which would have served a dual mixing and discharge purpose. A large geared wheel (28 inches in diameter), situated at the southwestern end of the pug mill, would have probably been connected to a belt wheel for power. The pug mill retains its manufacturing plate, identifying it as having been made by the Chambers Brothers Company in Philadelphia, the same company which manufactured the disintegrator and brick machine.

Like the disintegrator, the pug mill served to prepare the clay prior to its use in the brick machine. Pug mills would receive the pulverized clay from the disintegrator (probably by means of a conveyor belt) and mix it with water and/or sand until it reached a "stiff plastic" consistency appropriate for use in the extrusive brick machine utilized at this factory. The blades were designed and situated so that the mixed clay would gradually feed toward the discharge end of the tub. Although slightly smaller, the pug mill closely resembles the "No. 3 All-Iron Single Shaft Pug Mill" advertized in the 1907 Chambers Brothers Company trade catalog.

It is possible that the pug mill was originally situated above the surface of the ground so that the pugged clay could be gravity-fed into the adjacent brick machine. Alternately, the mill might have been situated on the ground with discharge blades to elevate the clay upwards to a spout where it would be moved by hand to the brick machine.

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The brick machine (Photograph 4, Figure 2) is situated immediately adjacent to the pug mill and is in its original configuration. Much of the gearing, superstructure, and discharge equipment of the machine is absent, though its critical components are at least partially represented. Its construction is entirely of cast-iron, with an oval gear support ring situated immediately behind a tempering case. The entire machine (approximately seven feet in length), along with its missing components, was supported on an iron rail frame. This frame extends approximately 23 feet to the northeast where it would have supported off-loading and cutting equipment. A brick machine mount is situated immediately northwest of the brick machine and may have served to support some of its now absent superstructure.

This type of brick machine is generally known as a "stiff-mud," "extrusive," or "auger" machine, which would force the prepared clay through a brick-shaped die (now absent) which was mounted at the discharge end. After extrusion from the die, the long "bar" of clay would pass onto a conveyor belt where it would be sanded and cut by machine. Several codes cast into the body of the machine suggest that this device represents the "C" model machine developed by the Chambers Brothers Company in the early 1880s (Chambers Brothers Company 1884). Despite the absence of a name (probably cast onto the missing superstructure), its manufacture by the Chambers Brothers Company is documented in the public records relating to the operation of the Davis and Kimpton facility. The Model C machine had a capacity of 50 bricks per minute or 25,000 bricks in ten hours of operation. The Model C sold in 1884 for \$1,500. Though certain portions of the brick machine, such as the loading hopper, gearing and drive shaft, upper tempering case, auger and auger case, brick die, and off-loading assembly (with sander and cutter) are missing, enough remains of the machine to interpret its operation and characteristics. Like the other equipment present at the site, however, its most important aspect is its in situ relationship to other aspects of the technological process which should not be altered in any way.

Two other sets of machine mounts are located immediately southeast of the pug mill and brick machine (Figure 2). These mounts are constructed of brick and have large anchor bolts protruding upwards from their surfaces. Based upon differences in the construction of the mounts, it is likely that at least two different pieces of machinery were once present at this location, the westernmost being supported on three larger mounts and the easternmost on the two smallest.

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It appears that the eastern set of mounts was constructed early in the operation of the plant, since soft-mud bricks (and shell mortar) were utilized rather than the stiff-mud bricks being produced at the site. This also corresponds with the use of soft-mud bricks and shell mortar in the machine mount immediately adjacent to the brick machine. The western set of mounts, however, are constructed with waster, extrusive brick and portland cement. The use of waster brick indicates that the construction of these latter mounts probably occurred after the plant had begun production.

Although no machinery has survived at this location, it is possible that all, or some, of these mounts supported intermediate drive machinery used in the transfer of power from the steam engine to the brickmaking equipment at the far end of the production line. It is also possible that at least one set of mounts supported equipment for saw milling operations which have been historically documented at this site. The more common value of saw milling equipment may account for the absence of this machinery, since it would have been of greater usefulness and marketability to John Davis after 1918 than the brickmaking machinery, the latter being abandoned at the site.

The remains of two brick kilns at the Davis and Kimpton yard are located approximately 200 feet east-northeast of the production line, and adjacent to the Warwick River (Figure 2). Kiln 1 is the smaller and northernmost of the two kilns at the site. Its dimensions are approximately 54 feet in length and 32 feet in width, oriented on a roughly southwest-northeast axis. Its presence is clearly discernible on the ground surface by a large rectangular mound of brick with periodic depressions where flues are located. This kiln ruin is symmetrically divided along its long axis with a central passage and perpendicular flues extending on either side. The flues on either side of the passage are probably connected beneath the passage. Kiln walls are laid without mortar in common bond with a more intricate pattern of brickwork present in the benches separating the flues. Unlike the remains of Kiln 2 (discussed below), the walls of Kiln 1 no longer extend above the level of the kiln floor. The flues extend below the kiln floor and would have been covered with cast-iron grates. Though the grates are no longer present, many of their cast-iron supports are still in place. Two-part, cast-iron kiln doors would also have been present, though only one of the door frames remains in situ on Kiln 1. A rectangular kiln door was recovered from the surface of Kiln 1. The rubble covering the ruins of Kiln 1 apparently resulted from its destruction by brick-robbing rather than from natural deterioration through time.

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The remains of Kiln 2 are separated from those of Kiln 1 by an apparent brick platform approximately twenty feet in width. At least two levels of this platform may be present, based on unrelated elevations obtained from the floor adjacent to each of the kilns. The presence of a floor, or working platform, is not uncommon to similar, late nineteenth century kilns.

Kiln 2 (Photograph 5) is the larger of the two kilns and is approximately 73 feet in length, 30.6 feet in width, and oriented on the same southwest-northeast axis as Kiln 1. The general details of its construction are similar to those of Kiln 1 with a number of exceptions. First, the walls of Kiln 2 survive above the level of the kiln floor. These walls, laid in common bond, are covered on the interior of the kiln with a thick layer of clay pargetting, probably to prevent heat loss. Bricks used in the construction of this kiln are wasters, unlike the uniform bricks used in the construction of Kiln 1. This suggests that the factory had been in operation for some time prior to the construction of Kiln 2. The entire kiln is constructed on a prepared bed of clay and soil rather than on the original ground surface (this may also be the case for Kiln 1).

The overall configuration of a central passage flanked by flues is identical to that of Kiln 1, though there are more flues in Kiln 2 owing to its larger size. Unlike Kiln 1, the central passage of Kiln 2 is flanked by entrance footings where it opened to the Warwick River. The superior preservation of Kiln 2 is also manifested by the in situ presence of cast-iron grates (Photograph 6) and many door frames along its southeastern edge. It should be noted that the northwestern edge of the kiln has sustained damage due to the robbing of brick following the abandonment of the facility.

Kiln 1 and Kiln 2 can be classified as rectangular, up-draft, open-top kilns. The firing of bricks in such kilns was accomplished through the burning of coal on the surface of the cast-iron grates with the resultant heat rising directly upward. Heat retention within the kiln would have been aided by the layer of pargetting applied to the interior walls of the kiln as well as by a frame roof elevated a few feet above its open top. Elevation of the roof was necessary in order to prevent the roof timbers from igniting when the kiln was fired. The unfired, dried bricks would have been carefully "hacked" along the benches between the flues with sufficient space retained between bricks for the even distribution of heat. The central passage would have served for access in loading and emptying the kiln. The double kiln doors were necessary for the loading of coal (upper door) and removal of ash and cinders (lower door) and are similar to those depicted in contemporaneous trade catalogs.

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The support structures associated with the Davis and Kimpton Brickyard consist of the remains of two buildings situated at the northwestern edge of the site and the remains of a substantial wharf (Photograph 7) which is exposed at low tide along the Warwick River. The buildings are depicted on the 1918 War Department map of Camp Eustis (Figure 4), and at least one of the structures is manifested by the remains of a brick pier constructed of waster bricks and portland cement. The use of waster bricks and the pier's location within the historic boundaries of the Brickyard tract, along with its depiction on the War Department map, indicate an association with the Davis and Kimpton operation. These structures may have served as a small factory office since John Davis' main office was located in downtown Newport News. The remains of the wharf may be a roughly rectangular area depicted on the same map. The scale of the map, however, precludes distinctions between a building and a short wharf.

The remains of a substantial cart (Photograph 8) are located east-northeast of the steam engine. This cart is approximately 11 feet in length and four feet in width. Construction is of both steel and wood, with a wooden superstructure supported on a steel frame of couplings and leaf springs. The cart is inverted and its wheels have been removed, possibly by vandals after the site was abandoned. Cast-iron frame braces are marked with "B.C.M.CO. 1903", an unidentified manufacturer (Baltimore Cart Manufacturing Company?).

It is likely that this cart was utilized either for the transport of unprocessed clay from the clay pits, or of unfired brick to drying areas and to the kilns. The use of "carts" is mentioned in many of the public documents relating to the operation of this plant. The presence of a large coupling suggests the use of the cart on a rail system which could have been present, although it is not specifically mentioned in archival sources. Several linear "depressions" seem to run from the production line to the kilns, but there is no evidence of rails or railroad remains. It is equally possible that this cart may have been pulled by draft animals.

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List of Contributing Buildings and Objects

- | | |
|-------------------|------------------------|
| 1. Kiln 1 | 1. Steam Engine |
| 2. Kiln 2 | 2. Boiler |
| 3. Wharf | 3. Disintegrator |
| 4. Office Bldg. 1 | 4. Pug Machine |
| 5. Office Bldg. 2 | 5. Brick Machine |
| | 6. Brick Cart |
| | 7. East Machine Mounts |
| | 8. West Machine Mounts |

Figures

- 1 Site Location Map
- 2 Site Map
- 3 Manufacturer's Name Plate
- 4 Brickyard Tract, Military Map, Camp Eustis, VA 1918

Photographs

Name of Property: Davis-Kimpton Brickyard
Location: West Bank of Warwick River, Mulberry Island,
Newport News, Virginia
Name of Photographer: Ronald A. Thomas
Date of Photos: March 1986
Location of Original Negatives: HABS/HAER Collection, National Park
Service, Mid-Atlantic Regional Office, Philadelphia, PA

Photograph #

- 1 Stationary Steam Engine, View West
- 2 Boiler, View Northwest
- 3 Disintegrator, View North
- 4 Pug Mill and Brick Machine, View West
- 5 Kiln 2 Arch and Door Frame, View North
- 6 Kiln 2 Interior, View South
- 7 Warwick River Shoreline and Wharf Remains, View North
- 8 Cart Remains, View North

Certifying official has considered the significance of this property in relation to other properties:

☐ nationally ☒ statewide ☐ locally

Applicable National Register Criteria ☐ A ☐ B ☒ C ☒ D

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Areas of Significance (enter categories from instructions)

Industry

Engineering

Period of Significance

late 19th/early 20th c.

Significant Dates

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

N/A

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Davis-Kimpton Brickyard is eligible for listing in the National Register under criterion C of 36 CFR 60 because the site demonstrates certain distinctive aspects of late 19th-early 20th Century brick manufacturing. Due to the high integrity of the brickyard, the site is also eligible under criterion D. The site is likely to yield important information on the applied manufacturing process of mechanized brick manufacturing, due to most of the machinery being still in situ and mostly intact. Many related structures, such as kilns, extractive areas, and associated offices and wharf, are partly intact and may yield additional information on the site.

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Brick manufacturing has been an important industrial activity throughout much of human history. Like other trades, however, brickmaking remained a laborious hand manufacturing process until the industrial revolution of the eighteenth and nineteenth centuries. The manufacture of bricks was a particular concern of the Virginia colonists from the earliest period of settlement during the seventeenth century. Only a few years after the establishment of Jamestown, brickmaking was clearly a valued activity, as is indicated in this passage describing the settlement of Henrico (James River below Richmond):

The colonie is removed up the river fourscore miles further beyond Jamestowne to a place of higher ground....

Being thus invited, here they pitch, the spade men fell to digging, the brick men burnt their bricks, the company cut down wood, the Carpenters fell to squaring out, the Sawyers to sawing, the Soldier to fortifying, and every man to somewhat. And to answer the first objection for holesome lodging, here they have built competent and decent houses, the first storie all of bricks...(Anonymous 1612:13-14).

Brick, however, was not extensively used as a building material during the colonial and early post-colonial periods due to an abundance of wood, shortages of manpower and other economic considerations (Carson et al. 1981).

Until the late nineteenth century, brick manufacturing was almost entirely a hand process differing little from medieval practices. The brickmaking process consisted of several stages, including the digging of the clay, initial processing (weathering, tempering, pugging), the production of the bricks (by either hand or later by mechanical means), the drying for a month or more, and the last stage the firing or burning, often in temporary kilns or "clamps" (Dobson 1850(I):80-87; McKee 1973:43-44). This manufacturing process can be applied to brickmaking as a whole, but the application of technology and the organization of individual yards varied considerably.

The traditional brickmaking technique was only slightly interrupted by the onset of the industrial revolution in the late eighteenth century. At that time, attempts were made at mechanization in both England and America (Bishop 1966:231; McKee 1973:44-45), though no widespread acceptance of mechanization occurred. Indeed, it is reported that one such early machine in southeastern Virginia was destroyed by local workers in 1833 who regarded it as competition for their jobs (Lovejoy and Henderson 1930:21).

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The middle of the nineteenth century, however, witnessed the transformation of the brick manufacturing industry through the development of machinery that could efficiently produce a superior product. Although a number of brick machine variations were introduced in the United States, England, and on the Continent (Derry and Williams 1961:590; Jameson 1958:670; McKee 1973:45-46), they all consistently operated on the "stiff-mud," extrusive principle, whereby clay was forced through a brick-shaped die by an auger. In the United States, this technology was pioneered by Cyrus Chambers of Philadelphia, an inventor who had previously achieved notoriety through his development of paper-folding machines for the publishing industry (Oberholtzer 1912). Chambers was granted his first patent on his device in 1863, and was subsequently granted other patents for brickmaking machinery through the end of the nineteenth century.

Brickmaking was traditionally "a highly decentralized industry serving local markets" (Deryanc 1976:2). Brickmaking in eastern Virginia at the turn of the century can be similarly described, with at least 36 yards serving both rural and urban areas from Alexandria to Norfolk (Reis 1906). Although most yards had adopted some mechanized manufacturing practices by the first decade of the twentieth century, typically the use of stiff-mud technology (16 yards), five of the seven yards in the Richmond area still manufactured bricks by hand. Most of the mechanized yards using stiff-mud technology were located from Richmond east to Norfolk (14 yards), possibly reflecting the more dramatic growth of that area during the late nineteenth and early twentieth centuries. Though the Davis and Kimpton Brickyard was not specifically noted by Reis during his survey of the clay products industry, it is likely that it was included in his general discussion of the Norfolk area (1906:170-171).

The traditional decentralization of the brickmaking industry is probably related to the fact that it required low capital and that a relatively inexpensive product was produced. Such factors would have encouraged the dispersed development of many small yards instead of a few large manufacturers. The persistence of traditional hand manufacturing methods, as described by Morrison and Reep (1890) for Richmond, Baltimore, and Philadelphia, and by Reis (1906) for Richmond, may reflect the more established nature of the industry in those older urban areas where the higher productivity offered by advanced technology would not have been worth the capital investment. Newly established yards (such as the Davis and Kimpton Brickyard) and those serving rapidly expanding markets (such as Newport News and Norfolk), may have considered the adoption of advanced technology, its greater productivity, and its required capital investment, as a more adequate

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means to take advantage of increasing local demand. The demise of the decentralized brickmaking industry after 1925, due to the increasing use of reinforced concrete (Derganc 1976:2), would have forced many small producers out of the industry in favor of a few highly mechanized plants whose productivity could entirely satisfy the reduced demand.

The Davis and Kimpton brick manufacturing operation is integrally related to both the local history of the late nineteenth century and to general trends within the industry. The high integrity of the remains is an important characteristic of the Davis and Kimpton site since it allows for a comprehensive understanding of an applied manufacturing process in a technological and regional historical context.

Though brickmaking technology has not been particularly well documented from an archeological perspective, colonial brickyards have been found at Jamestown (Harrington 1950), the Williamsburg area (Hunter 1984), and elsewhere in eastern Virginia (Heite 1970; Opperman and Thomas 1983). Typically, a traditional brickyard will be archeologically manifested by the presence of clay pits, the remains of either permanent kilns or temporary clamps (usually the latter), and a large amount of unmortared waster brick fragments. As noted by Hudson (1979) and Leslie (1970) through the behavioral information derived from the Ashburnham Estate brickworks, the archeological remains of accompanying structures (such as molding and drying sheds) are likely to be rare due to typically flimsy and above-ground construction. A traditional brickyard has also been identified at Fort Eustis (44NN14) immediately upstream from the subject of this study; this may be the site of the Dowsing operation if the assertions of Ridgell (1965:15) are correct.

As a result of the unusual in situ preservation of equipment and the high integrity of the property as a whole, the brick manufacturing process at the Davis and Kimpton yard can be reconstructed using remains at the site along with known information about late nineteenth century practices. The application of specific technological processes is considerably better understood at the Davis and Kimpton site than at other contemporaneous brick manufacturing sites in Virginia, and the value of such a well preserved site lies in its great ability to inform us about industrial activities commonplace at the turn of the century.

The operation of the Davis and Kimpton Brickyard from 1898 to 1918 was found to be well documented in local public records. Such documentation includes data concerning the financing of the operation, specific equipment utilized, and the disposition of the property throughout the late nineteenth and early twentieth centuries.

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Unfortunately, company records could not be located, although they may survive in private family collections. Archival research was also able to relate the specific contextual operation of the brickyard to technological characteristics of contemporaneous industrial trends.

The Davis and Kimpton Brickyard represents an example of the type of brick manufacturing plant and technological development which was revolutionizing regional industrial patterns at the turn of the twentieth century. The adoption of advanced technology at small yards represents a transitional period characterized by an expanding decentralized industry serving local markets, though at a more capitalized level to meet increasing demand. Thus, the Davis and Kimpton brick manufacturing operation is integrally related to both the local history and to the development of regional industrial trends in the late nineteenth/early twentieth centuries.

Anonymous

1612 The New Life of Virginea. In Tracts and Other Papers, Relating Principally to the Origin, Settlement, and Progress of the Colonies in North America, vol. I, edited by Peter Force. Reprinted 1963. Originally published 1836, Peter Smith, Gloucester, Massachusetts.

Bishop, John Leander

1966 A History of American Manufactures from 1608 to 1860. 3d ed. Reprinted. Augustus M. Kelley, New York. Originally published 1868, Edward Young, Philadelphia.

☒ See continuation sheet

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
☐ previously listed in the National Register
☐ previously determined eligible by the National Register
☐ designated a National Historic Landmark
☐ recorded by Historic American Buildings Survey # _____
☒ recorded by Historic American Engineering Record # VA-43

Primary location of additional data:

- ☒ State historic preservation office
☐ Other State agency
☐ Federal agency
☐ Local government
☐ University
☐ Other

Specify repository:

VA Division of Historic Landmarks
Richmond, Virginia

10. Geographical Data

Acreage of property 15.5 acres

UTM References

A 1 8 3 5 9 5 4 0 4 1 0 9 8 4 0
Zone Easting Northing
C 1 8 3 5 9 5 7 0 4 1 0 9 5 8 0

B 1 8 3 5 9 6 8 0 4 1 0 9 6 3 0
Zone Easting Northing
D 1 8 3 5 9 4 3 0 4 1 0 9 7 8 0

☐ See continuation sheet

Verbal Boundary Description

The "Davis and Kimpton" Brickyard National Register Site is located on the west bank of the Warwick River. This National Register property is

☒ See continuation sheet

Boundary Justification

The boundaries of the "Davis and Kimpton" Brickyard National Register Site were laid out to include the manufacturing area, the associated

☒ See continuation sheet

11. Form Prepared By

name/title MaryAnna Ralph, Preservation Planner
organization MAAR Associates, Inc. date July 1988
street & number P. O. Box 655, 9 Liberty Plaza telephone (302) 368-5777
city or town Newark, state Delaware zip code 19715-0655

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Carson, Cary, Norman F. Barka, William M. Kelso, Garry Wheeler Stone, and Dell Upton

1981 Impermanent Architecture in the Southern American Colonies.
Winterthur Portfolio 16:136-196.

Chambers Brothers Company

1884 New Brickmaking Machinery, Brick Machines, Artificial Dryers, Clay Extractors, Stone-Extracting Clay Crushers, Brick Presses, Etc. Philadelphia. Trade Catalog on file at Eleutherian Mills Historical Library, Greenville, Delaware.

1907 Brick Making Machines. Philadelphia. Catalog 24 on file at Eleutherian Mills Historical Library, Greenville, Delaware

Derganc, Christopher

1976 Wilkerson and Son Brick Works. Historic American Engineering Record DE-5. Library of Congress, Washington, D.C.

Derry, T. K., and Trevor I. Williams

1961 A Short History of Technology. Oxford, New York.

Dobson, Edward

1850 A Rudimentary Treatise on the Manufacture of Bricks and Tiles. John Weale, London.

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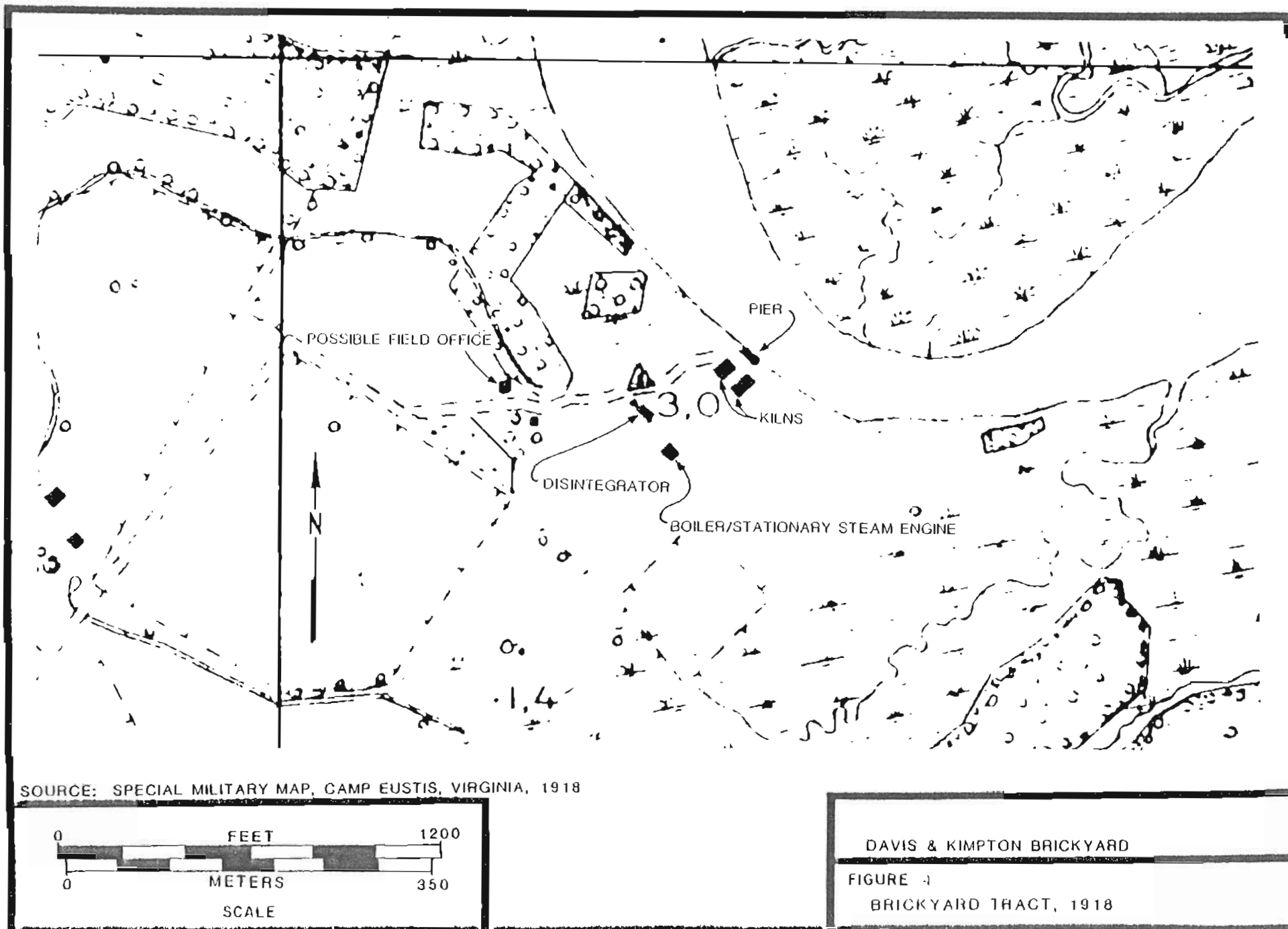
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Verbal Boundary Description

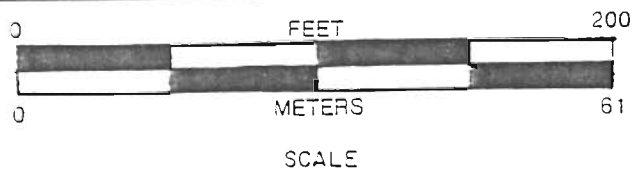
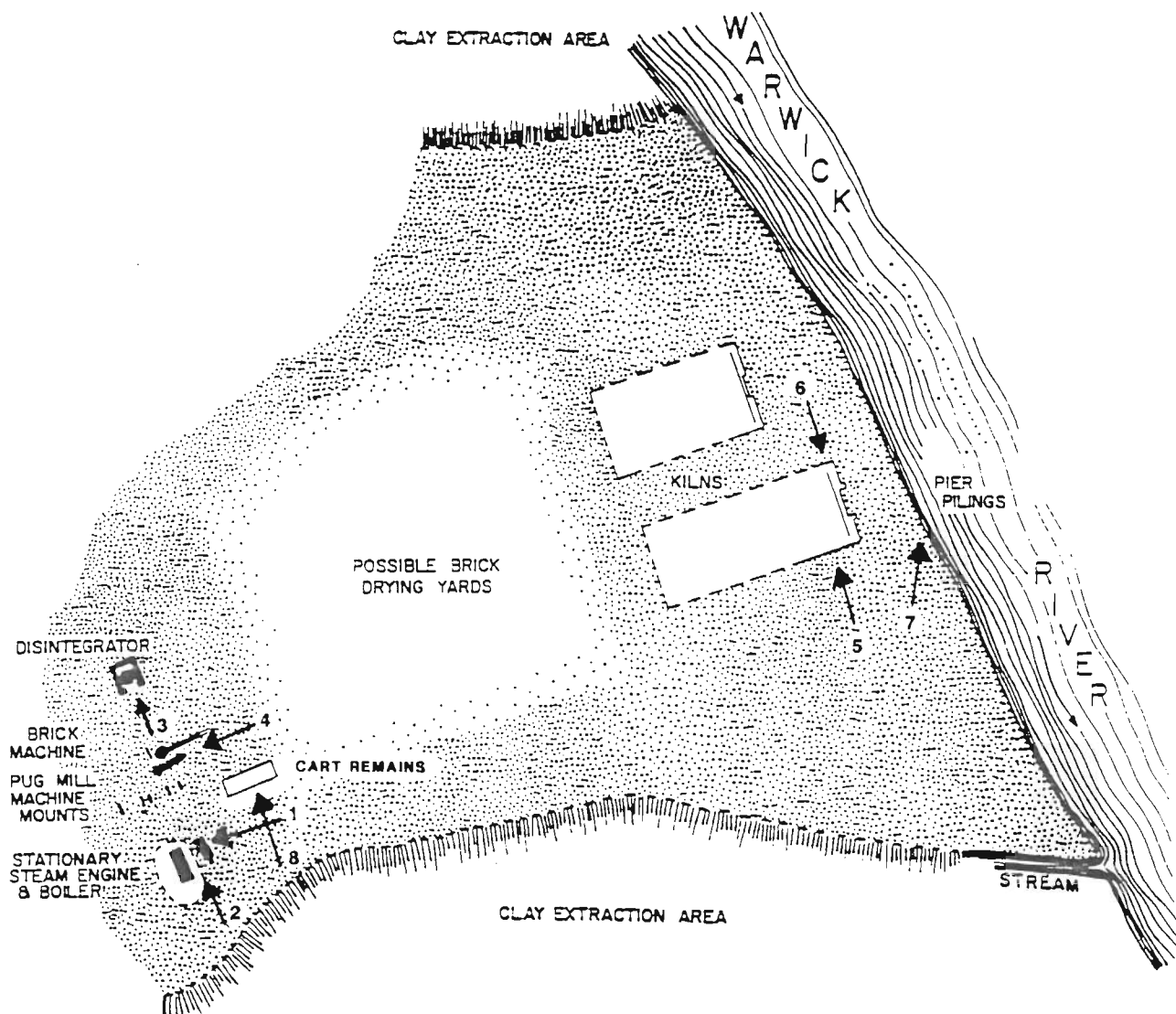
roughly rectangular. The 1300 foot northeastern boundary is along the Warwick River to the northeast side of the brick manufacturing area. From the Warwick River, the northwestern boundary goes 500 feet southwest. From this point, the southwestern boundary goes 1300 feet to the southeast. Turning at that point, the southeastern boundary goes 500 feet to the northeast to the shore of the Warwick River.

Boundary Justification

structures and wharf sites. The brick operation utilized most of the land area within these boundaries. The area of the two clay extraction pits is also included within the National Register boundaries. Although this low area of the site is now turning to wetlands, they are still contributing features to the interpretation of the brick manufacturing process and integrity of the site.

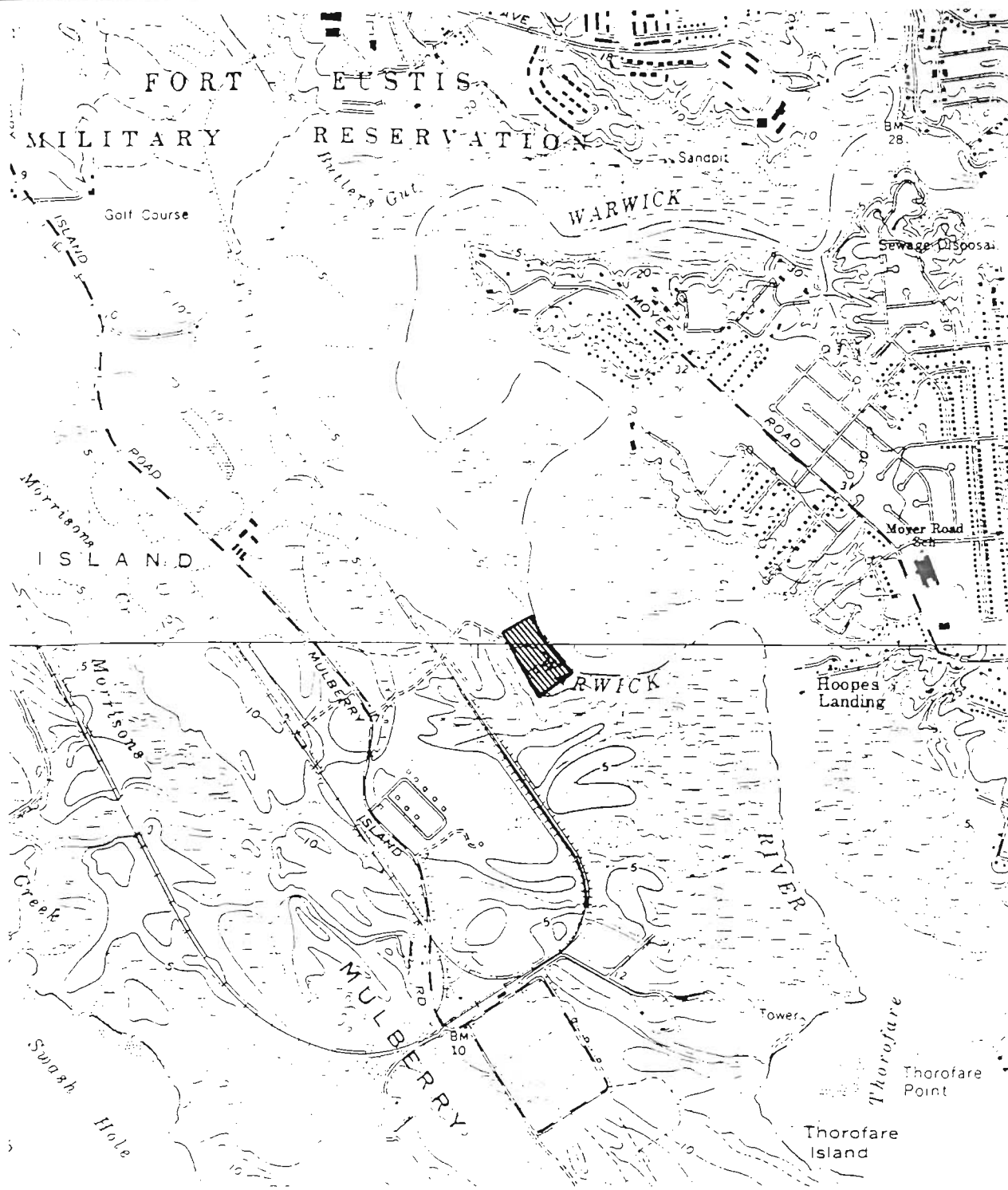


DAVIS & KIMPTON BRICKYARD PRODUCTION AREA OR PLAN



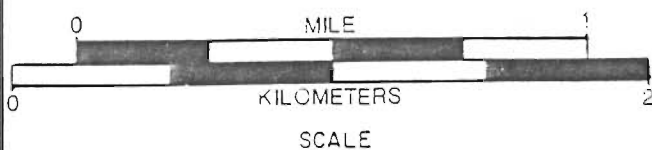
DAVIS AND KIMPTON BRICKYARD
NEWPORT NEWS, VIRGINIA

PHOTO LOCATION KEY



44NN15-DAVIS & KIMPTON BRICKYARD

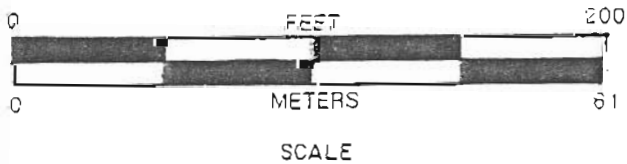
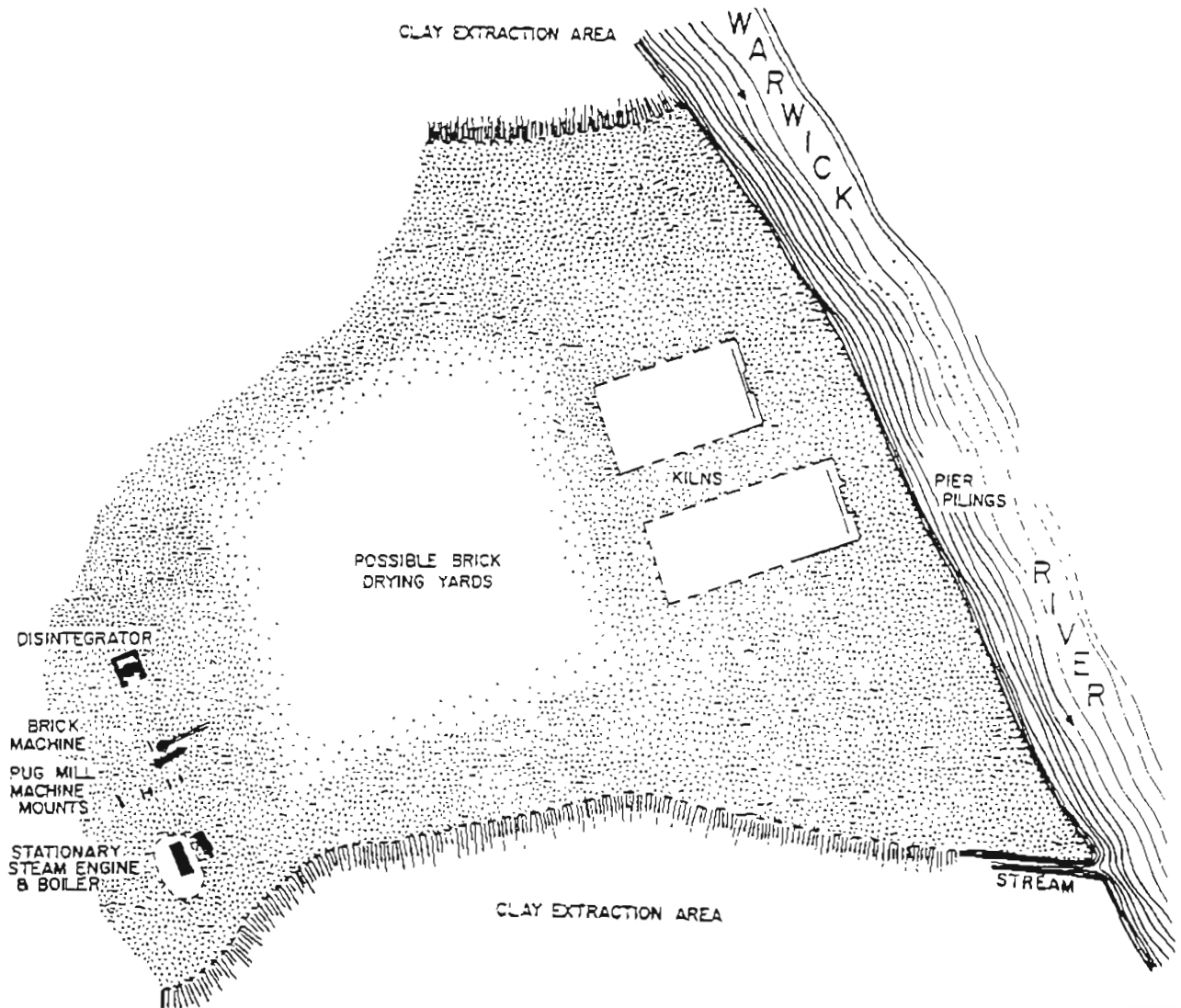
SOURCE: USGS YORKTOWN, VA., 1965, 1980 & MULBERRY ISLAND, VA., 1965, 1979



DAVIS & KIMPTON BRICKYARD

FIGURE 1
SITE LOCATION MAP

DAVIS & KIMPTON BRICKYARD
PRODUCTION AREA OR PLAN



DAVIS & KIMPTON BRICKYARD

FIGURE 2
SITE MAP

